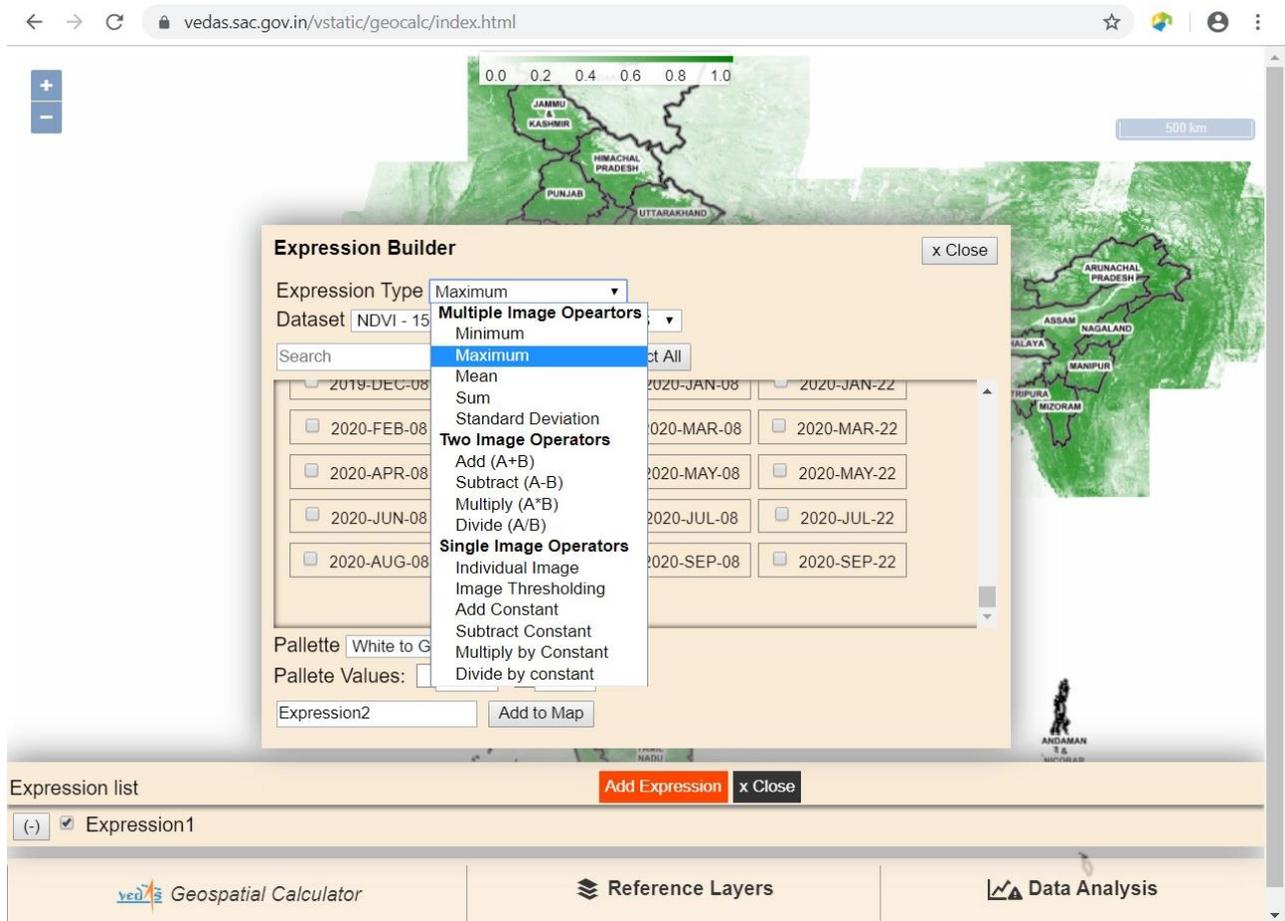




Geospatial Calculator on VEDAS

VEDAS has developed “**Geospatial Calculator**” as a processing service that allows user defined operations to be performed on a set of images (<https://vedas.sac.gov.in/vstatic/geocalc/index.html>). The broad purpose of this service is to offer an interactive platform for user defined operations to be performed on EO images. The intension is that huge EO data need not be replicated multiple sources. Instead, raw and often repeated products may be archived at a central location and offer it to be used and / or engineered as per requirement of each user. The processing load is served from high throughput VEDAS infrastructure. The requirement at user node is of a browser and internet connectivity.



Screenshot of VEDAS Geospatial Calculator

VEDAS has a decent repository of EO data. As of now, NDVI of AWiFS, MODIS and Sentinel-2 available on VEDAS archive are made available. An analyst can perform certain functionalities (e.g. mean, minimum, maximum, sum, standard deviation in time domain; thresholding; generating and visualising various combinations which use two or more images; performing arithmetic operations like add – subtract – multiply – divide) to understand a process (detect changes, quantify differences and associate them to another geophysical trend / pattern). Intermediate results of user defined expressions can also be used for subsequent analysis.

This platform accurately and efficiently processes vast amounts of satellite data. For example, identifying where and when NDVI change has occurred at high resolution. Basically, this development is a stepping stone towards facilitating analysis of “Big Data”. It is expected that with the availability of this platform at the hand of analysts / researchers, better and comprehensive exploitation of EO data / products by thematic scientists would result in greater understanding of natural processes and developing usable EO data based services. This should lead to devising a data based adaptive and responsive monitoring system.

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